

Dr. Karl Stapelfeldt
Chief Scientist, NASA Exoplanet Exploration Program

Education

- PhD., Astrophysics with graduate minor in Planetary Sciences, Caltech (1991)
- B.S.E., Mechanical & Aerospace Engineering and Engineering Physics, Princeton University (1984)

Interests and Experience

- Astrophysics: Protoplanetary and debris disks, exoplanets, star formation
- Techniques: Optical, infrared, and mm-wave observations; coronagraphy; scattered light and spectral energy distribution modeling of circumstellar disks
- Missions: Hubble Space Telescope WFPC2 Science Team, Spitzer Space Telescope Project Science Office, Herschel Space Observatory, LBTI Exozodi Key Science Team
- Mission studies: HabEx, LUVOIR, Exo-C (Study Chair), WFIRST, ACCESS, ATLAST, Terrestrial Planet Finder Coronagraph (Acting/Deputy Project Scientist), Eclipse

Employment History

- Jet Propulsion Laboratory - Astrophysics & Space Sciences Section
 - Chief Scientist, NASA Exoplanet Exploration Program (2016 - present)
 - Principal Scientist (2005-2011)
 - Research Scientist (2000-2005)
 - Scientist (1994-2000)
 - Postdoctoral Fellow (1993-1994)
- NASA Goddard Space Flight Center – Astrophysics Science Division
 - Chief, Laboratory for Exoplanets and Stellar Astrophysics (2011-2016)
- University of Massachusetts at Amherst – Department of Astronomy
 - Postdoctoral Research Fellow (1990-1993)

Selected Publications

Robinson, T., Stapelfeldt, K., Marley, M (2016) "Characterizing Rocky and Gaseous

Exoplanets with 2-meter Class Space-based Coronagraphs: General

Considerations" P.A.S.P. 128 5003

Stapelfeldt, K. et al. (2015) Exo-C Mission Study Final Report, NASA Exoplanet

Exploration Program internal document at <http://exep.jpl.nasa.gov/stdt>
Krist, J., Stapelfeldt, K., Bryden, G, and Plavchan, P. (2012) "Hubble Space Telescope

Observations of the HD 202628 Debris Disk", A.J. 144 45

Su, K.Y.L, Rieke, GH, Stapelfeldt, K.R. et al. (2009) "The Debris Disk around HR 8799", Ap.J. 678 985

Kalas, P. et al. (2008) "Optical Images of an Exosolar Planet 25 Light-Years from Earth"

Science 322 1345

Rebull, L.M., Stapelfeldt, K.R. et al. (2008) "Spitzer/MIPS Observations of Stars in the beta Pictoris Moving Group" Ap.J. 681 1484

Watson, A.M., Stapelfeldt, K.R., Wood, K., and Menard, F. (2007)

) "Multiwavelength Imaging of Young Stellar Object Disks: Toward an Understanding of Disk Structure and Dust Evolution", in PROTOSTARS AND PLANETS V., B. Reipurth, D. Jewitt, and K. Kiel eds, Univ. of

Arizona Press, Tucson, pp. 523-538.

Stapelfeldt, K.R. et al. (2004) "First Look at the Fomalhaut Debris Disk with the Spitzer Space Telescope", Ap.J.Suppl. 154 458

Stapelfeldt, K.R. et al. (2003) "Hubble Space Telescope WFPC2 Imaging of the

Disk and Jet of HV Tauri C", Ap.J. 589 410

Krist, J., Stapelfeldt, K. et al. (2000) "WFPC2 Images of a Face-On Disk Surrounding TW Hydreae", Ap.J. 538 793.

McCaughrean, M., Stapelfeldt, K., and Close, L. (2000) "High Resolution Optical and near-Infrared Imaging of Young Circumstellar Disks", review article in PROTOSTARS AND PLANETS IV, V. Mannings, A. Boss, and S. Russell eds., Univ. of Arizona Press, Tucson, p. 485

Padgett, D.L., Brandner, W., Stapelfeldt, K.R. et al. (1999) "HST/NICMOS Imaging of Disks and Envelopes Around Very Young Stars" A.J. 117 1490

Stapelfeldt, K.R. et al. (1998) "An Edge-on Circumstellar Disk in the Young Binary System HK Tauri", Ap.J. 502 L65

Burrows, C.J., Stapelfeldt, K.R. et al. (1996) "HST Imaging of the Disk and Jet of HH 30", Ap.J. 473 437

Stapelfeldt, K.R. et al. (1995) "WFPC2 Imaging of the Circumstellar Nebulosity of HL Tauri" Ap.J. 449 888

Stapelfeldt, K.R. et al. (1991) "Near Infrared Narrowband Images of Three Herbig-Haro Objects" Ap.J. 371 226